

**INSTRUCTIONS FOR PREPARING A
UNIVERSITY TRANSPORTATION CENTER (UTC)
STRATEGIC PLAN**

**U.S. Department of Transportation
Research and Innovative Technology Administration**

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Background. Since 1988, the U.S. Department of Transportation (DOT) has awarded grants to universities throughout the nation to support research, education, and technology transfer activities. DOT's Research and Innovative Technology Administration (RITA) manages the UTC Program. Grantees that receive funding authorized by 49 U.S.C. 5505 or 5506 must match their Federal grant with an equal amount from non-federal sources (this requirement does not apply to grantees receiving funding authorized by 49 U.S.C. 5338). Each grantee is called a University Transportation Center (a Center), whether acting alone or as the lead of a consortium of universities. Each Center must plan and conduct activities that further the mission and goals of the UTC Program. While the mission and goals are the same for all Centers, RITA encourages creative diversity in the approaches individual Centers take to reach these goals.

The Mission and Goals of the UTC Program, and of each individual Center, are shown below.

Exhibit I

MISSION: To advance U.S. technology and expertise in the many disciplines comprising transportation through the mechanisms of education, research and technology transfer at university-based centers.

GOALS

- 1. Research Selection:** an objective process for selecting and reviewing research that balances multiple objectives of the program.
- 2. Research Performance:** an ongoing program of basic and applied research, the products of which are judged by peers or other experts in the field to advance the body of knowledge in transportation.
- 3. Education:** a multidisciplinary program of course work and experiential learning that reinforces the transportation theme of the Center.
- 4. Human Resources:** an increased number of students, faculty and staff who are attracted to and substantively involved in the undergraduate, graduate and professional programs of the Center.
- 5. Diversity:** students, faculty and staff who reflect the growing diversity of the U.S. workforce and are substantively involved in the undergraduate, graduate and professional programs of the Center.
- 6. Technology Transfer:** availability of research results to potential users in a form that can be directly implemented, utilized or otherwise applied.

UTC Program Outcome. The outcomes desired from DOT's investment in the UTC Program are:

- research that supports the national strategy for surface transportation research;
- an increased number of Americans who are prepared to design, deploy and operate the complex transportation systems that will enhance America's economic competitiveness in the 21st century; and
- the transfer of technologies into practice that provides solutions to national transportation challenges.

Performance measures will be used to track the Centers' individual and collective progress in bringing about this outcome.

Strategic Plan. Each Center is required to develop a multiyear Strategic Plan setting out the activities to be undertaken during the life of the grant to achieve the six goals of the program. The following instructions set forth the requirements for the Strategic Plan that each grantee must submit for review and approval by RITA. The Strategic Plan should be the culmination of an intense planning and coordination process by those who will be involved in carrying out that Plan. It is the means by which a Center conveys the essence of what it seeks to accomplish with the funds made available under its grant.

Scope. The Strategic Plan shall reflect all work to be accomplished during the life of the grant.

Page Limit. The Strategic Plan should not exceed a total length of **fifty (50)** standard-size pages, including the appendix.

Table of Contents. Each Strategic Plan should follow the Table of Contents outlined in Exhibit II and described in greater detail *infra*.

Exhibit II**STRATEGIC PLAN TABLE OF CONTENTS**

- I. Program Overview
 - A. Glossary
 - B. Center Theme
 - C. Center Director's Summary
 - II. Program Activities
 - A. Research Selection
 - B. Research Performance
 - C. Education
 - D. Human Resources
 - E. Diversity
 - F. Technology Transfer
 - III. Management Approach
 - A. Institutional Resources
 - B. Center Director
 - C. Center Faculty and Staff
 - D. Multiparty Arrangements
 - E. Matching Funds
 - IV. Budget Details
 - A. Format
 - B. Grant Year
 - C. Salaries
 - D. Scholarships
 - E. Equipment
 - F. Foreign Travel
 - G. Other Direct Costs
 - H. Facilities and Administrative (Indirect) Costs
- Appendix - Baseline Measures for [*Name of Center*]

SECTION I - PROGRAM OVERVIEW. The Strategic Plan should begin with an Overview that provides readers with a contextual basis for understanding the objectives and activities described in Section II - Program Activities.

I.A Glossary. List and define uncommon words and acronyms used in the Plan. These might include technical terms or names of organizations.

I.B Center Theme. Each Center must select a theme which indicates the nature of the center it seeks to establish. The statement of the Center's theme should be clear and concise, and it should communicate the scope of the transportation center which is to be established or

maintained. **Note:** The theme must encompass more than one mode of surface transportation and must clearly link to the national strategy for surface transportation research (see sections II.A.3 and II.C.3 of this document for more information about the national strategy). The statement of theme should articulate the core reason for the Center's selection of the majority of its research, education, and technology transfer activities.

1. State the Center's theme beginning with the words: "The theme of this Center is ..."
2. After stating the theme, provide a statement of scope describing how the theme relates to the national strategy for surface transportation research and provides a common focus for Center activities.

I.C Center Director's Summary. The Center Director's Summary should provide a vision of what the Center will be at the end of the grant. It should focus on how far the Center will have progressed toward becoming a center of excellence in the subject area encompassed by the Center's theme and describe what part of that progress will be sustainable after the grant has terminated.

SECTION II - PROGRAM ACTIVITIES. This section of the Strategic Plan details where the Center is headed (UTC Program goals), activities that will lead to the successful accomplishment of the goals, and performance measures by which to assess progress toward the goals.

II.A Research Selection. This section should begin with a restatement of the goal:

"Research Selection Goal: an objective process for selecting and reviewing research that balances multiple objectives of the program."

1. Baseline Measures. To establish the point from which progress will be measured with respect to the Center's research selection program, provide the information called for as Baseline Measures 1 and 2 in the appended document entitled *Baseline Measures for University Transportation Centers*, referred to hereafter as "Appendix A". **Note:** For ease of reference, this and all other baseline information must be provided in a single Appendix to the Strategic Plan. When establishing all baselines, study the "Performance Indicators for UTCs" that are contained within the *Reporting Requirements for University Transportation Centers (3/06)* grant document and carefully consider the types of performance data that must be reported during the life of the grant; it is important to establish baseline data against which the Center will be able to report its level of performance.

2. Research Selection Program Outcome. Describe the Center's research selection process as it is envisioned at the end of the grant.

3. Planned Activities. Describe the major activities that the Center will undertake to bring about the described Program Outcome.

3.a Required Activities. Each Center is expected to devise and implement a process for selecting research projects that includes peers and other experts in the field, including at least one individual from the U.S. Department of Transportation. Selection criteria are to be clearly stated, reflective of the Center theme, and supportive of the national strategy for surface transportation research as identified by a report of the National Highway Research and Technology Partnership entitled *Highway Research and Technology: The Need for Greater Investment* (<http://gulliver.trb.org/publications/rforum/HwyRandT.pdf>) and the programs of the National Research and Technology Program of the Federal Transit Administration (http://www.fta.dot.gov/26_ENG_HTML.htm). The Center is strongly encouraged to support the national research, development, and technology priorities of DOT and its Operating Administrations, as identified by the *Department of Transportation Strategic Plan* (http://www.dot.gov/about_dot.html), the *U.S. Department of Transportation Research, Development, and Technology Plan* (<http://www.volpe.dot.gov/infosrc/strtplns/index.html>), and other items that RITA may post on the UTC Program's web site (<http://utc.dot.gov>) during the life of the grant to indicate DOT's current priorities. **Note:** Each Center's Strategic Plan is expected to identify the process by which it will select its research projects; it is NOT expected to identify the projects themselves.

3.b Recommended Activities. Each Center is strongly encouraged to support national transportation needs by addressing high-priority areas identified by DOT and its Operating Administrations. Two such DOT-wide priority areas as of the initial award date of this grant are:

3.b.1 Advanced Research. RITA defines this as "research that involves and draws upon basic research results to provide a better understanding of phenomena and develop innovative solutions – sometimes referred to as exploratory research in order to convey its more fundamental character, its broader objectives, and the great uncertainty in expected outcomes compared to problem-solving research." Advanced research may be done in collaboration with a state DOT or other knowledgeable entity, in support of the Federal Highway Administration's Advanced Research Program requirements or similar requirements of other DOT Operating Administrations.

3.b.2 Congestion Chokepoints. This is a near-term priority initiative that addresses the Secretary of Transportation's congestion mitigation strategy, with projects intended to demonstrate deployable results within one year and identify and/or ameliorate the factors that contribute to congestion of freight and/or passenger traffic in urban areas. Such projects may involve any discipline of science, engineering, technology, and policy analysis that is capable of addressing these factors.

4. Performance Indicators. Describe how the Center will obtain the information necessary to track its progress using Performance Indicators 1 and 2 as those are set forth in Exhibit A of the document entitled *Reporting Requirements for University Transportation Centers (3/06)* (referred to hereafter as the "UTC reporting requirements.") Discuss such issues as whether systems already exist within the university to provide the information or whether the Center will

devise its own mechanism to collect it.

II.B Research Performance. This section should begin with a restatement of the goal:

“Research Performance Goal: an ongoing program of basic and applied research, the products of which are judged by peers or other experts in the field to advance the body of knowledge in transportation.”

1. Baseline Measures. Provide the information called for as Baselines 3 and 4 in Appendix A.

2. Research Performance Program Outcome. Describe the Center’s research performance program as it is envisioned at the end of the grant.

3. Planned Activities. Describe the major activities that the Center will undertake to bring about the described Program Outcome. **Note:** All research conducted with UTC funding is to be subjected to external, merit-based peer review.

4. Performance Indicators. Describe how the Center will obtain the information necessary to track its progress using Performance Indicators 3 and 4 as those are set forth in Exhibit A of the UTC reporting requirements.

II.C Education. This section should begin with a restatement of the goal:

“Education Goal: a multidisciplinary program of course work and experiential learning that reinforces the transportation theme of the Center.”

1. Baseline Measures. Provide the information called for as Baselines 5 and 6 in Appendix A.

2. Education Program Outcome. Describe the Center’s education program as it is envisioned at the end of the grant.

3. Planned Activities. Describe the major activities that the Center will undertake to bring about the described Program Outcome.

3.a Required Activities.

3.a.1 Each Center’s education program is required to include multidisciplinary course work and student participation in research.

3.a.2 Each Center’s education program must support the national strategy for surface transportation research as identified by a report of the National Highway Research and Technology Partnership entitled “Highway Research and Technology: The Need for Greater Investment” (<http://gulliver.trb.org/publications/rtforum/HwyRandT.pdf>) and the programs of the National Research and Technology Program of the Federal Transit Administration

(http://www.fta.dot.gov/26_ENG_HTML.htm). The Center is strongly encouraged to support the national research, development, and technology priorities of DOT and its Operating Administrations, as identified by the *Department of Transportation Strategic Plan* (http://www.dot.gov/about_dot.html), the *U.S. Department of Transportation Research, Development, and Technology Plan* (<http://www.volpe.dot.gov/infosrc/strtplns/index.html>), and other items that RITA may post on the UTC Program's web site (<http://utc.dot.gov>) during the life of the grant to indicate DOT's current priorities.

3.a.3 Each Center is expected to choose (or decline to choose) one outstanding student of the year. Each participating Center shall award its Student of the Year \$1000 and the costs for the student to attend an award ceremony in Washington, DC, during the annual winter meeting of the Transportation Research Board (TRB).

4. Performance Indicators. Describe how the Center will obtain the information necessary to track its progress using Performance Indicators 5 and 6 as those are set forth in Exhibit A of the UTC reporting requirements.

II.D Human Resources. This section should begin with a restatement of the goal:

“Human Resources Goal: an increased number of students, faculty, and staff who are attracted to and substantively involved in the undergraduate, graduate, and professional programs of the Center.”

1. Baseline Measures. Provide the information called for as Baselines 7, 8, and 9 in Appendix A.

2. Human Resources Program Outcome. Describe the Center's human resources program as it is envisioned at the end of the grant.

3. Planned Activities. Describe the major activities that the Center will undertake to bring about the described Program Outcome. While all Centers are expected to engage in recruitment and outreach, no specific activities are required of all Centers.

4. Performance Indicators. Describe how the Center will obtain the information necessary to track its progress using Performance Indicators 7, 8 and 9 as those are set forth in Exhibit A of the UTC reporting requirements.

II.E Diversity. This section should begin with a restatement of the goal:

“Diversity Goal: students, faculty, and staff who reflect the growing diversity of the US workforce and are substantively involved in the undergraduate, graduate, and professional programs of the Center.”

1. Baseline Measures. Because of privacy concerns raised by grantees who received UTC

Program grants in prior years, RITA no longer requires the collection of performance measurements regarding diversity.

2. Diversity Program Outcome. Describe the Center’s diversity as it is envisioned at the end of the grant.

3. Planned Activities. Describe the major activities that the Center will undertake to bring about the described Program Outcome. **Note:** Although UTCs may target minorities and women as beneficiaries of Center programs for the purposes of achieving diversity, they may not exclude non-minorities and men from those same programs.

4. Performance Indicators. Because of privacy concerns raised by grantees who received UTC Program grants in prior years, RITA no longer requires the collection of performance measurements regarding diversity.

II.F Technology Transfer. This section should begin with a restatement of the goal:

“Technology Transfer Goal: availability of research results to potential users in a form that can be directly implemented, utilized or otherwise applied.”

1. Baseline Measures. Provide the information called for as Baselines 10 and 11 in Appendix A.

2. Technology Transfer Program Outcome. Describe the Center’s technology transfer program as it is envisioned at the end of the grant.

3. Planned Activities. Describe the major activities that the Center will undertake to bring about the described Program Outcome.

3a. Required Activities.

3.a.1 Each Center is required to maintain an up-to-date Internet home page which contains, at a minimum, the information required by the UTC reporting requirements.

3.a.2 The Center will be asked by DOT to participate in occasional meetings of UTC and/or DOT experts on high-priority topics, or to provide expert advice to DOT on technical or education topics.

4. Performance Indicators. Describe how the Center will obtain the information necessary to track its progress using Performance Indicators 10 and 11 as set forth in Exhibit A of the UTC reporting requirements.

SECTION III - MANAGEMENT APPROACH. This section of the Strategic Plan should set

forth the Center Director's management plan for meeting all the requirements of the grant and managing the personnel and activities of the Center. It should address each of the following subjects.

III.A Institutional Resources. Describe the institutional resources available to the Center. Such resources encompass research and training facilities, human resources, physical facilities, and institutional support capabilities. In the event of a planned consortium or partnership with another university, describe the collective resources that will be available to the Center. **Note:** If there is any pre-existing center of transportation studies or research at the institution[s] comprising the Center, describe how the UTC's activities and accomplishments will relate to, and be distinguishable from, those of the other center[s].

III.B Center Director. The Center Director is responsible for implementing the Center's Strategic Plan and ensuring compliance with all other UTC Program requirements. Describe how the Center Director plans to effectively direct and oversee the Center's funds, personnel, and programs. This description is particularly important in multiparty arrangements (see III.D below) involving distant partners. The Center Director is expected to represent the Center and/or the Program at external meetings and is required to participate in up to two annual meetings held by DOT with the directors of all of the University Transportation Centers.

III.C Center Faculty and Staff. Describe the duties and responsibilities of Center faculty and staff who will spend 50% or more of their time on Center activities.

III.D Multiparty Arrangements. Describe any consortium or partnership arrangements in detail. The grantee, as the direct and primary recipient of DOT funds, must perform a substantive role in carrying out Center activities and not merely serve as a conduit for funding to another party. Identify any key personnel involved in Center management at other institutions and explain the arrangements for bringing those personnel into Center business.

1. Resource Concentration at the Grantee University. In the case of a multiparty arrangement, unless otherwise approved in writing by RITA, a minimum of one-half of the Center's total budget shall be concentrated at the lead university, i.e., the grantee. State the level of concentration at the lead university and discuss the distribution of funding among other parties.

III.E Matching Funds. Grant funds shown in the UTC Grant Agreement as authorized by U.S.C. 5505 or 5506 are subject to a 100% non-Federal match; a Center receiving such funding shall describe the prospective amount[s] and source[s] of the Center's matching funds. Grant funds shown in the UTC Grant Agreement as authorized by U.S.C. 5338 are not subject to a match requirement; a Center receiving such funding may omit this section from its Strategic Plan

1. Eligibility as Matching Funds. The rules governing the use of in-kind and cash contributions as matching funds are set forth in the most recent revision of OMB Circular A-110. Matching funds may be cash or in-kind, and they must be used to accomplish program objectives and the

purpose of the grant and be fully documented and carefully accounted for in the Grantee's records. **Note:** Any restriction on the use of Federal funds applies equally to non-Federal matching funds.

2. Special Rule for UTC Program. The non-Federal share of Center costs may include funds provided to a recipient under section 503, 504(b) or 505 of title 23, United States Code. (Those sections refer to the technology deployment, local technical assistance, and state planning and research programs managed by the Federal Highway Administration.)

SECTION IV - BUDGET DETAILS. Although each Center will receive a multiyear grant, for which it must develop a multiyear Strategic Plan, RITA will award funding in annual increments in the amounts authorized in 49 U.S.C. 5338, 5505, or 5506 (subject to availability of funding). Prepare a Budget Plan for the first year of the Center's operation, reflecting the sum of: (1) the amount of Federal funding stated in the Grant Agreement, plus (2) at least an equal amount of non-Federal matching funds. In the case of a multiparty arrangement, also provide budget plans for each of the member institutions. **Note:** Since RITA does not require the Centers to obtain matching funds on a project-by-project basis, it does not require that the proportion of matching funds be shown for each line item in the Center's Budget Plan.

IV.A Format. The Center Budget Plan may be presented in any reasonable format but must present line items using the cost categories indicated in Exhibit III. The Center Budget Plan should include attachments showing the calculations by which the line items were derived. Until a Center selects the specific projects it will fund, many costs will have to be estimated.

IV.B. Grant Year. Indicate the beginning and ending dates of your Center Grant Year (e.g., 8/1/06 thru 7/31/07). A "Grant Year" is analogous to a fiscal year. It is the period reflected in a Center's Budget Plan and Financial Status Reports, and future funding awards under multiyear grants will be made at approximately the beginning of the Grant Year, or as soon thereafter as funding is available. RITA understands that universities which operate on different academic and financial cycles may have difficulty collecting and reporting data within a single fixed time frame. Centers are, therefore, invited to name the dates within which they will plan, manage and report on Center activities. **Note:** If your Grant Year will have begun prior to the effective date of the Grant Agreement, or you plan to seek reimbursement for preincurred costs, be sure to reflect those costs in your Center Budget Plan.

IV.C. Salaries. For each staff member, indicate the percent of time or effort in relation to total professional activities. In computing estimated salary charges, an individual's base salary represents the total authorized annual compensation that his or her institution would be prepared to pay for a specified work period. The base salary for purposes of computing charges to a UTC grant excludes income that an individual may earn outside full-time duties at his or her institution. If an individual is appointed on a less than full-time basis for the base salary period, indicate the percentage of full-time appointment, e.g., 50 percent of full-time equivalent. Where appropriate, indicate whether the amounts requested for the Principal Investigators, Center

Director, and other personnel are for summer salaries and/or academic year salaries, and indicate the formulas for calculating these salaries.

IV.D Scholarships. Grant funds may be used to provide student scholarships, i.e., financial assistance which is not compensation for labor. **Note:** Scholarship funding is subject to the limitations set forth in section III.5 of the “General Provisions of Grant Agreements for UTCs.”

IV.E Equipment. Items of equipment having a unit acquisition cost of \$5,000 or more are considered “permanent equipment.” Written permission must be obtained from RITA, per section III.3 of the General Provisions, prior to the purchase of any permanent equipment. Such permission is not required for the purchase of “Expendable Property, Supplies, and Services”, a category that includes such tangible items as expendable office and laboratory supplies and services such as telecommunications.

IV.F Foreign Travel. Travel to any destination outside of the United States and its territories is considered “foreign travel.” Written permission must be obtained from RITA, per section III.4 of the General Provisions, prior to the initiation of such travel.

IV.G Other Direct Costs. Itemize other anticipated direct costs not mentioned above.

IV.H Facilities & Administrative (Indirect) Costs. Facilities and administrative (F&A) costs, formerly referred to as “indirect” costs, are those incurred for common or joint objectives and, therefore, cannot be identified readily and specifically with a particular project or program.

Exhibit III

University Transportation Center (UTC) Budget Plan

Name of Grantee: _____ Grant Year: _____ thru _____
 (Date) (Date)

CATEGORIES	Budgeted Amount	Explanatory Notes
Center Director Salary		
Faculty Salaries		
Administrative Staff Salaries		
Other Staff Salaries		
Student Salaries		
Staff Benefits		
Total Salaries and Benefits		
Scholarships/Tuition		
Permanent Equipment		
Expendable Property, Supplies, and Services		
Domestic Travel		
Foreign Travel		
Other Direct Costs (Specify)		
Total Direct Costs		
F&A (Indirect) Costs		
TOTAL COSTS*		
Federal Share		
Matching Share (if applicable)		

*Includes Federal and Matching Shares

APPENDIX A

BASELINE MEASURES FOR UNIVERSITY TRANSPORTATION CENTERS (UTCs)

Report for the most recently completed academic year and for the institution(s) comprising your UTC.

Research Selection

1. Number of transportation research projects selected for funding.

1a. Number of those projects that you consider to be: basic research _____, advanced research _____, and applied research _____. Projects may be included in more than one category if applicable.

2. Total budgeted costs for the projects reported in 1 above.

\$ _____

Research Performance

3. Number of transportation research reports published.

4. Number of transportation research papers presented at academic/professional meetings.

Education

5. Number of courses offered that you consider to be part of a transportation curriculum. Report courses shown in the university course catalog as being offered, whether or not they were conducted during the academic year being reported.

Undergraduate: _____

Graduate: _____

6. Number of students participating in transportation research projects. Count individual

students (one student participating in two research projects counts as one student).

Undergraduate: _____
Graduate: _____

Human Resources

7. Number of advanced degree programs offered that you consider to be transportation-related.

Master's Level: _____
Doctoral Level: _____

8. Number of students enrolled in those transportation-related advanced degree programs.

Master's Level: _____
Doctoral Level: _____

9. Number of students who received degrees through those transportation-related advanced degree programs.

Master's Level: _____
Doctoral Level: _____

Technology Transfer

10. Number of transportation seminars, symposia, distance learning classes, etc. conducted for transportation professionals.

11. Number of transportation professionals participating in those events.
